

Application No.: 09/939,626

AMENDMENT TO CLAIMS

1. (Previously presented) An image recorder optically scanning an image recording medium in a main scanning direction and a subscanning direction for recording an image on said image recording medium, comprising:

a light source emitting a first light beam;

a spatial light modulator dividing said first light beam into a plurality of second light beams arranged at least in said subscanning direction while modulating said plurality of second light beams in response to image signals;

a focusing optical system for focusing said plurality of second light beams on a recording medium; and

a main scanning system for scanning said recording medium with said plurality of second light beams in said main scanning direction, wherein

said plurality of second light beams constitute a plurality of beam subsets,
each beam subset consists of N adjacent light beams in said subscanning direction, where
the number N is an integer of at least two, and

said plurality of light beams belonging to each said beam subset are synchronously
modulated by a single image signal for a single pixel so that each pixel on said recording
medium is recorded by a single beam subset,

whereby power density for recording each pixel is increased in response to the square of
the number N .

2. (Original) The image recorder according to claim 1, satisfying the following
inequality:

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$$L_a \leq L_b \leq (N \times L_a)$$

where L_a represents the size of a beam spot, formed by each second light beam on said recording medium, in said subscanning direction, and

L_b represents the size of said beam spot in said main scanning direction.

3. (Original) The image recorder according to claim 1, further comprising:
 - a numerical value changing element for changing the number N in response to light intensity required for image recording, and
 - a magnification changing element for changing a magnification of said focusing optical system in response to the number N changed by said numerical value changing element.

4. (Original) The image recorder according to claim 1, wherein
said spatial light modulator is a light valve with no discernible boundaries between adjacent modulating elements.

5. (Original) The image recorder according to claim 4, wherein
said light valve is the Grating Light Valve™.

6. (Previously presented) An image recorder optically scanning an image recording medium in a main scanning direction and a subscanning direction for recording an image on said image recording medium, comprising:

a light source emitting a plurality of modulated light beams from a plurality of light emitting devices arranged in said subscanning direction;

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a focusing optical system focusing said plurality of light beams on a recording medium;
and

a main scanning system for scanning said recording medium with said plurality of light
beams in said main scanning direction, wherein

said plurality of light beams constitute a plurality of beam subsets,
each beam subset consists of N adjacent light beams in said subscanning direction, where
the number N is an integer of at least two, and

said plurality of light beams belonging to each said beam subset are synchronously
modulated by a single image signal for a single pixel so that each pixel on said recording
medium is recorded by a single beam subset,

whereby power density for recording each pixel is increased in response to the square of
the number N .

**7. (Original) The image recorder according to claim 5, satisfying the following
inequality:**

$$L_a \leq L_b \leq (N \times L_a)$$

where L_a represents the size of a beam spot, formed by each light beam on said recording
medium, in said subscanning direction, and

L_b represents the size of said beam spot in said main scanning direction.

8. (Original) The image recorder according to claim 6, further comprising:
a numerical value changing element for changing the number N in response to light
intensity required for image recording, and

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a magnification changing element for changing a magnification of said focusing optical system in response to the number N changed by said numerical value changing element.

9. (Canceled)